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by

Zenon Urbański



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By: Zenon Urbanski

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Geophysical Phononic Energy
as a Source of Biophysical Effects

Zenon Urbanski

The intensified energy exchange band and the differences of the gradients of the component level of the geomagnetic field on the surface of the ground and the associated phenomena of pathology in living matter, as well as the disturbance in inanimate matter, arise especially in underflow of deep sub-surface water. They are known as the source of biophysical effects; whereas the mechanics of this phenomena, its analyzed observation and measurement constitute the subject of this article.

In the chosen instance, a water-flow constitutes within the rocks of the earth's crust a column of fluid moving through rock waste. This movement produces the electrokinetic Quinck effect, inducing Faraday's electromotive force, the Lorentz transformations, and Hall's pressure. These phenomena are independent of the purely mechanical speed of the movements of the liquid, whereas the linear character of the same water-course together with the laws of magnohydrodynamics play a remarkable role in the formation of electromagnetic phenomena observable on the surface of the earth, which notably facilitates methods of controlled measurement

for verification of the accuracy of biophysical results.

These very phenomena, however, are conditioned upon the time of the duration of the electromagnetic induction independent of the liquid movement and its attendant fluctuations or fading. For, in reality, the water-course is linearly indeterminate hence also the time of duration of the induction of electromagnetic transformations are difficult to state precisely. As a result there is an unexpected dynamic effect for such systems and the results of the reactions last quite long within the earth. It is necessary to emphasize that such a characteristic in this phenomenon makes it difficult to employ classical surveying and also obligatory repeatability. As a result this phenomenon evaded the attention of physicists until the discovery of the mechanism of cosmic magnetism, which required expansions of the framework of classical electrodynamics and reference to the field of quantum physics.

The heretofore static treatment of the dynamic results of the kinetics of gradient differences in the geomagnetic field of the earth did not yield measureable effects. It did not take into account the characteristics of the time of the mechanical movement of the liquid explained by Reynolds by "magnetic number" in analogy with another physical magnitude called the "hydrodynamic number" by Reynold which designated the time of duration of free

movements in a liquid column under the influence of the internal friction of the liquid.

For, if in hydrodynamic investigation there is taken in account that the dispersion of the liquid in the analyzed case is replaced by electromagnetic dispersion, then, in evaluation of this phenomenon, we obtain Reynolds "magnetic number".

To be sure by this method are expressed the peculiarities of cosmic electromagnetics to which analogies nonetheless are obvious. The basic laws of electrodynamics find similar expression in both cases. The difference is only that, in each case, there must be used laws taken from another system of physical conditions. For cosmic material, its irregularity must be considered and, for geophysical observations, its discontinuity. Perhaps supplementary energy can arise by the expense of kinetic energy from the movement of water particles in the rock crust. The entire linear system functions like an energy transformer, strengthened by the energy of the geomagnetic pole. Moreover, the very gradient of the flow column in relation to the pole on the surface also has effect upon the composition of the magnetic pole causing this strengthening. Considering, moreover, that flows or, more exactly, fluids flowing in these flows constitute an electrolyte dispersed in water, (with a considerable content of ferromagnetic substances), these liquids, with particles of random dimensions, produce whirling movements which are essentially highly turbulent, thus

ever more strengthening the energy of the electromagnetic pole of the earth.

In these conditions, in order to illuminate the mechanism of the phenomenon of intensification of energy exchange and its biophysical band effects as a hydrognostic method, utilizing for localization, first of all, underground waters used in hydroeconomics, there is accepted a three-part reference model:

- atmosphere, as a continuous phase - gaseous,
semi-tropic
- earth, as ideally compressed - a constant anisotropic body
- water, polielectrolitic - as a discontinuous and incompressible liquid, with complete viscosity and isotropic properties.

However, a special example considered in this article is underground water flows producing a biophysical effect on the surface of the earth; water moving through diversiform fissures in tectonic formations of the rock crust. They perform various geological functions, as well as flowing on the floors of many geotectonic formations with magnetohydrodynamic characteristics associated with the influence of changes, disturbances and hysteresis as well as geomagnetic variations as an energy source for the phenomena occurring in analyzed physical effects. For water, in conformity with the definition adopted in the model, is a liquid that both conducts and works excellently with the geomagnetic pole. The fissure character of the flows seems to be the de-

cisive agent in the formation of intensified earth-atmosphere energy exchange, as a source belt of disturbances and pathology in the existential environment of man as well as the source of geoinformation, (not only in hydrognostics) determined with the aid of biophysical effect.

The accuracy of this proposition would result from the fact, that examination of a water movement - a polielectrolite - in the fissures of the rock crust, filled by rock waste, with a preponderance of silicates with traces of primary magnetism - paleomagnetism - is doubtless an energy source. This is corroborated by the fact that the same environment was taken as a source of electrokinetic energy, which Quinck described in 1859, as induced by the friction of a liquid turbulently rushing in a flow column with a defined drop, independent of the inclination of the surface of the terrain, under various pressures resulting from the effects of the geomagnetic pole.

In such a closely associated system comprising a rock mass and the water flowing through it, there arise changes in pressure and density as well as in the geomagnetic field which produces turbulence in the liquid and a "quasi-pinch" effect in the flow column. It needs to be emphasized that the medium itself is, according to Quinck, electropositive and the environment - the rock mass - electronegative. The consequences of these highly diversified conditions is the arising of a magnetohydrodynamic wave, in conformity to the laws of classical physics, joining hydrodynamics and electrokinetics through the formation,

in these conditions, of a flat wave, electromagnetic, magnetosonic and magnetoacoustic.

To the specific conditions of its creation belong, first of all, electrical conductivity, geomagnetic induction, phase displacement, as well as water flow of indeterminate linear dimension. These parameters - Lennert holds - taking into consideration the variable section of the flow and other non-isotopic peculiarities of the medium, cause the production of an Alfven wave with all its attributes.

The result of such hydrogeological conditions is the formation of oscillations in the liquid of aperiodic compression and expansion of the water. As a reaction to the effect of the changing geomagnetic field on the water particles, and especially on their dipolar structure connected with vibrations as a result of magnetostriction, there occurs a phenomenon similar to sound propagation - hence the analogy to magnetosonic waves. The speed of their propagation coincides with the speed of the magnetohydrodynamic Alfven waves in an area of low frequency identifying themselves with the usual sound, therefore there exists the possibility of treating them as magnetoacoustic waves.

In these conditions vibrating according to the laws of magnetostriction, the dipole, moving in a flow of molecular water is found to be in perpetual movement due to the influence of the geomagnetic pole at an average intensity of $2 \cdot 10^{-4}$ to $5 \cdot 10^{-5}$ Oersted and

with a water dipole moment of 1.87 Debye. Hence, as results from electrokinetic assumptions, the dipole ~~moment~~ ^{movement} of water fluctuates within the approximate range of 1.0 to 1.5%, which would correspond to an angular frequency of 10^{13} sek⁻¹ and a quantum energy value of ca. 0.03 electronvolts, coupled with a flat magnetohydrodynamic Alfvén wave, as a carrier of "quasi low-temperature plasma" of a length of from 40 to 60 micrometers.

This wave, as regards the preferred direction of water's vibration in the liquid, is polarized with a vector of geomagnetic induction at one plane by the coupling of electrical and magnetic components perpendicularly to itself, establishing a vertical direction of propagation. From the length of the waves and their propagation within a range of 40 to 60 micrometers, it is known that they are not subject to damping by passing through various media of relative magnetic penetrating power, nor are their density nor conductivity affected, regardless of specific inductive capability. The propagation thus is easier in the form of a flat wave in the given space model without the possibility of screening.

For detection of the radiation of these waves of 40 to 60 micrometer length there is used what in essence is a Golya type detector, with a liminal sensitivity range of $3 \cdot 10^5$ V/W and a wave interval of 1 to 2000 micrometers, at a noise level of 10^{-10} watts and a constant time measure of $(1-2)10^{-2}$ seconds.

With regard to the infrasound character of the range of the receiving detector, there is the possibility of identification and reaction, also the subinfrasound character of this range of the wave allows its penetration through solid, liquid and gaseous media. The coefficient of the extinction of the propagation function for this subinfrasound range can be omitted and it can be postulated that these wave lengths are not subject to damping and that the generator of the phononic waves, in this case a water flow, radiating energy even in a microwatt range, can be received and recorded at theoretically arbitrary distances, as occur in the case of reacting to and recording biophysical effects.

This conclusion is confirmed especially by the results of observations and measurements taken, of disturbances in inanimate and animate material and in a biocenotic environment as well as, first of all, on micro and macro flora and fauna culture breeding material and also in practical geognostics.

However, Alfvena waves, as is well known, change their form with the passage of time as do acoustic waves. They coincide as regards form with Riemann waves, adopting the form of so-called "simple waves" with the manifestation of a tendency to discontinuity in time. With this discontinuity there are connected ^{velocities of spreading with a tendency to change to corresponding} fast and slow magnetohydrodynamic waves contained in ^{rapid and slow} a hypersonic and infrasonic interval.

The generation of these waves itself is connected

with the phonon-electron reaction and is dependent upon the dipole vibrations of the water moving turbulently in the fissures of a flow under the variable influence of the geomagnetic pole and the concurrence of vibrations of the ideally elastic entire water flow conduit together with its filler as special energy, inducing excited states in the forming crystals of the rock waste. This particular "excited state" together with the entire medium constitutes a quantum of electronic excitation wandering especially inside the periodic system of the crystalline lattice of the rock waste. In consequence of this there is occasioned additional phonon energy connected with the surface vibrations of the system along with the transmission of vibrations and the phonon-phonon reaction beyond the piezoelectrical effects in the rock waste, and the entirety, intensified by the fluctuating intensity of the geomagnetic pole, moves together with its carrier - the flat wave - vertically, over a water flow, together with a regressive movement of its neighbors, the medium of rock crust, recorded as a biophysical effect.

With this vibratory or "phononic energy" movement, with a magnitude of 0.03 eV there is also connected thermal energy essential to its excitation, at a temperature approximately equal to the environment or ca. 300° Kelvin. It's necessary to note that the analysis of vibrations produced in the given example disclose yet another fact, namely the optical effects recorded over the water flows in the

infrared range, independent of the energy sufficient to quantum excitation of vibrations 0.03 eV for waves ca. 40 micrometers and the observation in this range of strong energy dispersion and absorption on the earth's surface. They are not without effect in the biological development of the plant and animal world.

In further reference to the reported quantum mechanics phenomena, especially as regards the optical absorption occurring over the water flows, it is necessary to emphasize that along with "excited state", Frenkel noted bunches of atomic excitation. The wave frequency is conditioned by this, as is the case with the speed, ^{by} concentration of admixtures in the material of constant phase attaining on the average 10^{14} in cubic centimeters, at an intensity field to the order of 10 volts per centimeter. This speed is attained in the limits of 0.00167 meters per second, and for water amounts to 0.6 meters per second, according to N. C. Little.

If such a phononic hypersonic wave propagation occurs under the influence of the magnetic pole, these nuclear spins from which is constructed the medium, subject to its activity, are changing and the nucleus has the magnetic moment, producing the differences of energy levels. This gives the resonance, by assumption, that the hypersonic corresponds to its frequency or multiple. Thus it follows that all atoms are always capable of entering into resonance and that there is no relaxation of the crystalline

lattice and the excitation spreads ideally uniformly through the entire crystal. Observations and measurements demonstrate that this undoubtedly takes place in reported phenomena, as do the results of disturbances and pathology, together with the biophysical effect. For both hypersounds as well as infrasounds in radiation belts joined with a water flow flowing in the rock crust, are measureably observed intensified energy exchanges in the Tropo and Biosphere, penetrating to the Atmosphere.

Due to its subtle nature in the noted circumstances, the hyper and infrasounds are observed and, with its mechanical generation, produce known sensitization in micromolecular processes in animate and inanimate material, causing biophysical effects manifested in the effect of involuntary muscle contractions of the operator's ^{motor} system.

This presentation of a specific phenomenon relative to liquid movement in the earth is an analogy to geotectonic movements and energy conservation of diversified geological systems. In this article we have confined ourselves exclusively to the source of phononic energy of geophysical origin and its biophysical effects. The mechanism of biophysical reaction by the operator organism is a separate question, which takes geophysical information on the laws of biophononic resonance, generated in processes of information of biological metabolism in conjugated emission of an electromagnetic and phononic wave as a result of structural vibrations of the entire organic structure.

- Dexter D.L., Knox R.S. - excitons - New York - 1965
- Frenkel J. - Phys.Rev., ~~1931~~ 37,17,1276 - 1931
- Fritsch V. - Geologische Baugrunduntersuchungen - Berlin - 1960
- Hartwig L. - Theorien zur mikrosismischen Bodenuhr - Geophysikalische Monographien - Leipzig - 1962
- Jacobs J.A. - Geomagnetic Micropulsations - Berlin - Heidelberg - New York - 1970
- König H., Ankermüller R. - Über den Einfluss besonders niederfrequenter elektrischer Vorgänge in der Atmosphäre auf den Menschen - Naturwissenschaften - 1960
- Langmuir I.B., Neilsenberger W.D. - Foundations of future electronics - New York - 1961
- Little M.C. - Magnetohydrodynamics - New York - 1967
- Ollendorf R. - Erdströme - Basel - Stuttgart - 1969
- Presman A.S. - Elektromagnitnyye polja i zhivaya priroda - Moskva - 1962
- Radwanowski L., Urbanowski Z. - Geobiocenotyczne uwarunkowanie inwestycji budowlanych - Warszawa - 1973
- Radwanowski L., Urbanowski Z. - Radiestezja terenów urbanizowanych - Warszawa - 1977
- Ronracher H., Inanga A. - Die Mikroviolation - Bern - Stuttgart - Wien - 1969
- Sedlak W. - Role biologiczne a nowa wizja życia - Lublin - 1967
- Sedlak W. - Ewolucja Ziemi - Warszawa 1963
- Sedlak W. - Wulkanizm i trzęsienia ziemi w geometrycznym zespole zjawisk - Lublin - 1963
- Sedlak W. - Zaburzenia pola biologicznego jako przyczyna narosli rakowatej na drzewach - Lublin - 1968
- Sedlak W. - Zróżnicowanie chemicznej treści Ziemi na strefy oraz zjawiska wulkanizmu - Lublin - 1965
- Sedlak W. - ABC elektromagnetycznej teorii życia - Warszawa - 1968

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- Sedlak W. - Biofizyczne aspekty ekologii - Warszawa - 1970
- Sedlak W. - Magnetohydrodynamika biologiczna w zarysie - Warszawa - 1971
- Sedlak W. - Plazma fizyczna jako podstawa bioenergetyki - Dublin - 1972
- Sedlak W. - Plazma fizyczna i laserowe efekty w układach biologicznych - Warszawa - 1970
- Turow S.A., Pietrow M.P. - Jądrowy rezonans magnetyczny w ferromagnetykach i antyferromagnetykach - Warszawa - 1971
- Urbański Z. - Wpływ promieniowania podziemnych źródeł wodnych na życie i rozwój pszczoł - Poznań - 1936
- Urbański Z. - Różdżkarstwo na usługach gospodarki wodnej - Warszawa - 1937
- Urbański Z. - Przeciwpowodziowe prewencyjne wykorzystywanie radiestezji - Warszawa - 1961
- Urbański Z. - Biologische Wirkung der Zentimeterwellen - München-Solln - 1962
- Urbański Z. - Dermopatologia w obrębie podrażnień geopatologicznych - Warszawa - 1969
- Urbański Z. - Próba wykorzystania rozwoju mikroflory na pod-

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ziemnych żyłach wód włączonych dla sprawdzenia
wskazań radiestezyjnych - Warszawa - 1970

Urbański Z. - Bieżące prace nad seymentacją wodnych rotworów
glinokrzemianów nad podziemnymi ciekami wody -
Warszawa - 1970

Urbański Z., Walerowicz S. - Geotektoniczne warunki lokalizacji
pasiek nad ciekami wodnymi - Warsz
awa - 1970

Urbański Z. - Fakty i mity różdżkarstwa - Warszawa - 1977

Wever R. - Einfluss schwacher elektromagnetischer Felder auf
die Periodik des Menschen - 1968

Varga A. - Einfluss von Magnetfeldern auf das Wachstum von ~~man~~
Escherichia Coli und *Bacillus subtilis* - Heidelberg
1973

Fritsch V. - Beiträge zur Physik der Wünschelruten Frage -
München - Solin - 1936

Fritsch V. - Das Problem geopathischer Erscheinungen von Stand
punkt der Geophysik - München - 1955

Lambor J., Urbański Z. - Pomiar różnicy temperatury na żyłach
wodnych jako próba sprawdzenia wska-
zań różdżkarskich - 1952

Grabiec S., Rublewski J. - Niektóre energetyczne problemy w
biologii - 1969

Hartmann E. - Arbeitskreis für Geobiologie - Eberbach

Wanna, d. p. v. 1977.
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